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Division of Surface Water
Response to Comments

Project: Reyskens Dairy LLC CAFO NPDES Permit
Ohio EPA ID #: 2IK00019*AD

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Ohio EPA held a public hearing and comment period on December 11, 2006, regarding the NPDES permit for Reyskens Dairy LLC. This document summarizes the comments and questions received at the public hearing and during the associated comment period, which ended on December 22, 2006.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format.

Ohio EPA is providing responses to comments received at the Reyskens Dairy LLC public hearing which was held on December 11, 2006. Where more current information is applicable, the comments will be addressed using that information.

A discharge from the dairy was observed in January 2007 and Ohio EPA requested that corrective actions be implemented and that responses to questions on the dairy's Manure Management Plan (MMP) be submitted. No response was received and in August 2008 the dairy requested to withdraw its NPDES permit application. Ohio EPA requested more information from the dairy on its withdrawal request and this information was received in October 2008. No immediate action was taken by Ohio EPA and the dairy had a discharge of contaminated storm water in October 2009.

As a result of the 2009 discharge, Ohio EPA issued Director's Final Findings and Orders to Reyskens Dairy in October 2011. The orders required the dairy to pay a civil penalty and to submit an updated MMP in order to obtain an NPDES permit.

Public Comments

Manure Management Plan (MMP) and Land Application of Manure

Comment 1: **Commenters expressed concern over the lack of written contracts for the land application fields listed in the applicant's MMP and the availability of the acreage for the term of the permit (five years).**

Response 1: Contracts are not required by federal concentrated animal feeding Operation (CAFO) regulations. However, the permittee is required to meet the permit requirements for manure application. Should the lack of available cropland lead to violations of permit conditions, Ohio EPA has the authority to require additional acreage be obtained in order to reduce violations of Ohio's Water Quality Standards. If fields change, the plan must be updated accordingly. Total available acreage is important for long-term sustainability of this CAFO operation, but not as important as proper timing, rate and method of manure application in any given year. In fact, it is not unreasonable that manure (especially dilute liquid) be applied several times per year on the same field as long as the agronomic rate of nutrient addition does not exceed that which is needed for the subsequent crops. Regular inspections at CAFOs allow regulatory entities to review soil tests, application fields, rate, timing and agronomic uptake of applied nutrients.

Comment 2: **Commenters expressed concern over the amount of acreage contained in the MMP for the land application of manure generated from the dairy facility. Concerns included insufficient acreage and the potential for over application of manure.**

Response 2: The revised MMP provided as part of the National Pollutant Discharge Elimination System (NPDES) permit application appears to be developed in accordance with permit requirements. If it becomes evident that not enough land is available for application in accordance with permit conditions, Ohio EPA will require corrective actions.

The most recent MMP, submitted July 6, 2012, contains 2,911.49 acres available for land application. This takes into consideration sand removal and manure solids removal. The farm nutrient budget of the revised plan indicates that 2,740 acres are needed to utilize available manure

phosphate at crop removal; therefore enough acreage should be available to apply manure based on phosphate removal.

Ohio EPA recognizes that MMPs are useful only when updated to account for variations that occur with respect to revised cropping patterns, added land, removed land, etc. Conditions in Ohio EPA CAFO NPDES permits require that MMPs be updated regularly to account for current operational conditions.

Comment 3: **Commenters expressed concern over the validity of the soil samples included in the MMP for the land application fields. Concerns include the use of samples representing more than 25 acres and samples representing more than one field.**

Response 3: All soil samples in the 2012 plan are for parcels smaller than 25 acres.

Failure to have access to sufficient acreage to land apply manure in accordance with the permit could result in Ohio EPA ordering the facility to obtain additional land, haul manure elsewhere (treatment facility) and/or reduce manure production.

Comment 4: **Commenters expressed concern over the potential for flooding on fields listed in the MMP.**

Response 4: The NPDES permit does allow manure to be land applied on fields that are listed as prone to flooding but only outside of the time when flooding is expected.

In addition to restrictions on application during expected flooding, manure cannot be applied on any field where the soil is saturated, where the application would cause ponding or when flooding is expected to occur. See Part VII, B, 2 of the permit for specific requirements.

Comment 5: **Commenters expressed concern with the land application of liquid manure on tile drained fields.**

Response 5: The NPDES permit contains specific provisions for the land application of manure on tile drained fields. These provisions are intended to minimize the potential for discharge of manure and include reduced rates, soil

disturbance to break up soil fractures and micropores and tile outlet inspections. See the permit requirements in Part VII, B, 3 and 4 of the permit.

Comment 6: **Commenter questioned the meaning of "per application event" as used in Part VII, B, 4, a of the draft NPDES permit.**

Response 6: Manure can be applied to a field more than once a year, depending upon the nutrient budget, especially if the manure is liquid and low in nutrients. However, factors such as soil moisture content and hydraulic loading need to be taken into consideration for each application event.

Comment 7: **Commenter questioned whether Ohio EPA has inspected every application field contained in the MMP to be sure that the field has tile plugs.**

Response 7: Tile plugs are portable, inflatable devices that need to be readily available during manure land application events. For example, the manure applicator could keep a set of tile plugs in the tractor for use when needed. Each field does not need to have tile plugs installed, especially during times when manure is not being applied.

Tile stops, however, are permanent devices installed at the field tile outlets. Ohio EPA encourages the installation of these shut off devices on fields that regularly received manure (i.e., center pivot fields), fields with a history of field tile discharges and on fields that drain to sensitive surface waters.

Comment 8: **Commenter questioned the permit applicant's experience and/or educational background to appropriately manage the manure generated at the facility.**

Response 8: Under the NPDES permit regulations, Ohio EPA does not conduct background or experience evaluations for facility owners or operators. By applying for and receiving permit coverage, the owner/operator is accepting liability for managing the facility in accordance with the terms and conditions of the permit. Failure to do so will result in enforcement.

Comment 9: **Commenter questions whether potential conduits to surface waters (as used in the definition of setback) could include soil cracks leading to tiles, vertical fractures in the soil or abandoned wells.**

Response 9: The term "setback" in the NPDES permit means "a specified distance from surface waters or potential conduits to surface waters where manure, litter, and process wastewater may not be land applied. Examples of conduits to surface waters include but are not limited to: open tile line intake structures, sinkholes, and agriculture wellheads." Potential conduits could also include soil cracks leading to tiles, possibly vertical fractures in the soil and abandoned wells if these are connected to surface waters.

Comment 10: **Commenter questioned whether the land application of manure without coverage under an effective NPDES permit is a violation of state and federal regulations.**

Response 10: The practice of land applying manure does not necessarily trigger the requirement for the CAFO to apply for an NPDES permit. It is the discharge of manure into waters of the state from land application without coverage under an effective NPDES permit that would be a violation of federal and state regulations.

Comment 11: **Commenters expressed concern over the crop yields used in the MMP.**

Response 11: Crop yields vary from year to year due to many factors, especially the weather. The current MMP indicates that the expected corn grain yields are 150 bushels per acre.

Ohio EPA will review crop yields during inspections and can require adjustments in values used for manure application calculations if necessary.

Comment 12: **Commenters expressed concern over the manure analysis data used in the MMP.**

Response 12: Reyskens Dairy is required to obtain representative manure samples for analysis in order to acquire nutrient properties of their manure. The dairy's current MMP is set up such that it follows the Narrative Approach for determining manure nutrient application rates. The Narrative Approach emphasizes that a methodology be adhered to each year

when calculating application rates. Therefore, manure application rates are determined each year using the same methodology even where nutrient properties change due to variations in weather, sampling methods, and other factors.

A 2011 manure analysis for an agitated sample from Pond 1 returned a value for phosphorus of 13.5 pounds per 1,000 gallons for lagoon. This value appears reasonable. This is consistent with the sample value of 15 pounds per 1,000 gallons of phosphorus (P_2O_5) provided in "Manure Characteristics" by MidWest Plan Service, 2004 (MWPS-18, Table 8, for estimated liquid pit manure characteristics for a dairy herd).

Comment 13: **Commenters expressed concern over use of inflated yields and under representative manure analysis in the MMP to reduce required land application acreage.**

Response 13: See Responses 11 and 12.

Comment 14: **Commenters expressed concern over the use of nitrogen limitation as the basis of manure application in the MMP rather than phosphorus.**

Response 14: Under the NPDES permit requirements, liquid manure application rates shall be based on crop nitrogen requirements or removal, crop phosphorus requirements or removal, restrictions on volume of liquid manure application and application rate restrictions. For phosphorus requirements, see Part VII, A, 4, h. Under provision (2)(iii) of this section, it states that, "the application rate for phosphorus shall not exceed the removal rates for a realistic yield goal of planned crops, unless following the procedures in (h)(3) below." Provision (h)(3)(i) states that, "prior to the land application of manure, a land application site shall be assessed with either the phosphorus index risk assessment procedure or the phosphorus soil test risk assessment procedure in Part VII,C. Under the Phosphorus Soil Test Risk Assessment Procedure, application criteria can be based on recommended nitrogen or phosphate for soils with a Bray P1 less than 40 ppm, recommended nitrogen or phosphate removal, whichever is less, for soils with a Bray P1 between 40 ppm and 100 ppm, or recommended nitrogen or phosphate removal, whichever is less plus an additional distance criteria from surface waters or other

sensitive areas or filter strips, for soils with a Bray P1 between 100 ppm and 150 ppm."

Therefore, manure can be applied based on nitrogen requirements in accordance with phosphorus considerations. It should also be noted that the revised plan appears to contain sufficient acreage to apply manure at phosphorus removal rates.

Comment 15: **Commenters question the state and federal regulations pertaining to sludge generated from the treatment of sanitary sewage versus manure.**

Response 15: Federal and state regulations relating to biosolids or sludge are distinctly separate from any rules (state or federal) related to land application of manure. In the development of the federal CAFO regulations in 2003 and 2008, U.S. EPA concluded that the control of pathogens (namely fecal coliform) through proper land application best management practices is the best conventional technology for CAFOs. The treatment technologies examined in the rule development were found to be cost prohibitive and not appropriate for application nationwide. For additional information, see the preamble to the 2008 CAFO regulations at: http://cfpub.epa.gov/npdes/afo/cafofinalrule.cfm.

Comment 16: **Commenter questioned whether Ohio EPA will require manure generated at the dairy facility to be tested for pathogens.**

Response 16: The NPDES permit will not require the sampling of manure for bacteria or other microbial organisms at this time. Bacteria and other microbial organisms are present in raw manure. Land application requirements have been included in the permit to minimize the risk of these microorganisms entering surface waters, mainly through setbacks, timing consideration and rate restrictions.

Comment 17: **Commenter expressed concern regarding the volume of manure generated by the facility and potential threats to surface and ground waters.**

Response 17: Regardless of the size of the facility or volume of manure produced, discharges to waters of the state are prohibited. Should a facility demonstrate an inability to properly manage the manure produced, Ohio EPA will require corrective

actions, which could include an ordered reduction in livestock numbers to bring manure generation to a level that can be properly managed by the facility.

Comment 18: **Commenter questioned the reasoning for allowing fall application of manure when such practice has a high potential to cause nitrates to leach into field tiles.**

Response 18: CAFO NPDES permits contain provisions for fall manure application designed to account for potential nitrate leaching. In Part VII, A, 4, g, (3), each manure application site is to be assessed with the Ohio Nitrogen Leaching Risk Assessment Procedure in Part VII,C. If the site has a high leaching potential based on the assessment and no growing cover crop, then application of manure is limited to 50 pounds per acre as applied nitrogen from June 1 to October 1. After October 1, the air temperature is typically low enough to reduce conversion to nitrate.

Comment 19: **Commenter noted that commercial fertilizer applications are not included in the MMP and that the use of additional fertilizer would result in additional acreage required based on crop removal rates.**

Response 19: In response to Ohio EPA's October 6, 2006, comment letter, North Point Engineering indicated that the manure management plan does not show commercial fertilizer being used.

Comment 20: **Commenter questioned the application of manure to legume crops since they do not require additional nitrogen to grow. This could potentially result in water pollution.**

Response 20: Legumes use nitrogen from both the atmosphere and soil. Current standards in Ohio do not prohibit application of fertilizer or manure to fields where legume crops are grown.

In Part VII, A, 4, g, (2), ii. the NPDES permit requires the subtraction of nitrogen credits from legumes in calculating the agronomic rate for nitrogen for the next crop. Also the permit states that, "when applying nitrogen to a grass or legume cover crop that is growing or being established immediately after manure application, manure can be applied at the recommended nitrogen rate (using the Ohio

Agronomy Guide, OSU Bulletin 472) for the next non-legume crop of the nitrogen removal rate for the next legume crop."

At this time, Ohio's standards allow the application of manure to fields prior to planting legume crops because the plants will use the nitrogen available in the soil as well as the other nutrients provided by the manure. Nitrogen credit is then used in calculating N requirements for the following crop.

Comment 21: **Commenter questioned whether Ohio EPA will monitor manure applications to make sure the dairy is complying with the permit.**

Response 21: Ohio EPA will conduct records reviews during the normal course of inspections at the dairy to address this concern. This office will also review all records associated with specific complaint investigations relating to the application of manure.

Comment 22: **Commenter stated that manure application should be prohibited when runoff into surface waters or contamination of ground water is likely.**

Response 22: Permit conditions are included in the NPDES permit to address this concern. See the land application provisions in Part VII, B, 2.

Comment 23: **The MMP and soil analyses should be carefully reviewed to ensure that correct numbers are used to estimate the phosphorus and nitrogen budgets and that the application rate is adequately limited to ensure that water quality is protected.**

Response 23: The updated plan has been reviewed and, if followed, impacts to surface waters from manure application should be minimized.

Comment 24: **Commenter is concerned about water ponding in the fields in the area, including the dairy property and on the manure land application fields. Concern is expressed over runoff into the streams and, eventually, Lake Erie. Commenter questions whether monitoring will be done on the runoff.**

Response 24: Permit requirements state, "Land application of manure shall not cause ponding or runoff. For liquid manure applications, the land application shall not exceed the available water capacity in the upper eight inches of the soil in the application field." The operator is also required to visually inspect fields for runoff. This office recognizes that precipitation related runoff carries nutrients associated with manure and fertilizer in runoff. The purpose of requiring implementation of best management practices (BMPs), and in this case, permit requirements written based on current Ohio Natural Resources Conservation Service Conservation Practice Standards, is to minimize the nutrient loss associated with precipitation related runoff from fields receiving manure applications. Monitoring will be performed in the event of a spill or discharge.

Comment 25: **Commenter noted that several manure application setbacks for water wells are not included on the land application maps included in the MMP. Commenter questioned whether these will be inspected before manure application occurs.**

Response 25: Ohio EPA does not typically "check out" private wells during reviews of CAFO applications. Where manure is alleged to be placed in violation of private well setback requirements, these instances will be investigated, and violations documented, where warranted. Fields are required to be inspected prior to land application events. Ohio EPA encourages manure managers to flag setbacks prior to application.

Ground Water

Comment 26: **Commenters expressed concern over the presence of abandoned, uncapped oil wells located in the manure application fields being a pathway for manure to enter ground water.**

Response 26: This office is not aware of specific instances where ground water has become contaminated via this transport mechanism. Where uncapped wells are known to be located, they should be identified and scheduled for proper closure. There is no regulatory mechanism, however, requiring these locations be identified and reconciled prior to the land's use for application of manure. Language has been added to the permit requiring setbacks to be

maintained around known uncapped wells in the land application fields. The Ohio Department of Natural Resources, Division of Mineral Resources Management regulates oil and gas wells. For additional information on the program go to: http://www.dnr.state.oh.us/mineral/mineral/oil/default/tabid/10371/Default.aspx.

Comment 27: **Commenter questioned whether monitoring wells will be installed at the dairy site that would indicate whether any discharge is getting into the ground water.**

Response 27: Monitoring wells will not be required as part of the NPDES permit. This office has authority to investigate allegations of ground water contamination and to add such requirements for monitoring if conditions warrant. The NPDES permit does not provide approval to discharge to ground waters, which are waters of the state, only surface waters. Applicable setbacks from conduits to ground waters shall be maintained.

Surface Water

Comment 28: **Commenter questioned the permitting of discharges to surface waters that are listed by Ohio EPA as impaired.**

Response 28: The receiving stream is located in the watershed assessment unit for the Middle Branch Portage River (headwaters to downstream Rocky Ford Creek) that is listed as impaired on Ohio's 303d list. A Total Maximum Daily Load (TMDL) report for the Portage River watershed was issued on August 29, 2011. This permit only allows discharges of clean storm water (or storm water associated with industrial activity) and requires that it meet water quality standards, thus this discharge should not contribute to additional impairment.

Comment 29: **Commenter how Ohio EPA could verify that only uncontaminated storm water would be discharged from the dairy facility.**

Response 29: In the design of the dairy facility, clean storm water is separated from contaminated storm water using berms, storm sewers, diversion structures, vegetated drainageways, etc. This is all part of how the facility is able to comply with the NPDES permit requirements for no discharge of

contaminated storm water. The engineering plans show the areas of the facility where storm water is contained and areas that drain to the storm water detention basin.

Clean storm water (runoff from barn roofs, front driveways, etc.) can be discharged. This clean storm water is called "storm water associated with industrial activity" throughout the permit. In this dairy, clean storm water is routed to a storm water detention basin that has an overflow to the roadside tributary. This clean storm water overflow must be sampled twice per year to verify that it is clean. May and November were selected for the sampling because sufficient precipitation should occur in these months to cause an overflow from the detention basin.

Comment 30: **Commenters stated that surface waters adjacent to the facility and land application areas should be sampled frequently to verify water quality is being protected.**

Response 30: As mentioned in the Response 29, Reyskens Dairy LLC must collect samples of storm water associated with industrial activity to verify that it is not contaminated with manure. The dairy will be required to collect a sample of any prohibited discharges from the production area.

As for land application fields, there is a requirement that CAFO operators visually monitor and make record of inspections of manure application fields for dry weather discharges (via both surface and tile drains) and report discharges to Ohio EPA so that they may be responded to and cleaned up appropriately.

Additional water quality sampling is not included in the NPDES permit due to the difficulty of isolating only the fields used by the dairy for manure application from other pollutant sources in the watershed.

Comment 31: **Funding should be made available for citizen monitoring under Ohio EPA's Volunteer Monitoring Program.**

Response 31: Information on Ohio EPA, Division of Surface Water's Volunteer Monitoring Program is available at: http://www.epa.ohio.gov/dsw/credibledata/index.aspx. The program offers training for the various levels of qualified data collection. However, funding for sample collection and analysis is not available through this program. Funding may

be available for water quality sampling through Ohio EPA's Office of Environmental Education. For additional information, go to: http://www.epa.ohio.gov/oee/EnvironmentalEducation.aspx.

Other agencies and groups should also be contacted regarding water quality sampling resources such as the Portage River Basin Council (local watershed group), Wood County Health Department and Wood County Soil and Water Conservation District.

Comment 32: **Commenter expressed concerns over water quality impacts, manure discharges via field tiles and impacts to Lake Erie. Commenter asked why cow manure is not treated to the same requirements as human wastewater. Commenter also was concerned about pathogens, hormones and antibiotics present in the land applied manure.**

Response 32: See Responses 15 and 16.

Comment 33: **Commenter questioned whether Ohio EPA will be monitoring the streams and rivers adjacent to the Reyskens Dairy and the manure application fields.**

Response 33: Where there are allegations or reports from the dairy, manure applicators or citizenry that water quality is compromised due to manure runoff, this office will make every effort to investigate and collect samples for analysis to determine to what extent water quality is compromised. Where violations exist, notices of violation will be drafted and sent to the entity or entities responsible. Ohio EPA conducted an extensive chemical and biological monitoring of the Portage River watershed in 2006 through 2008.

Comment 34: **Commenter asked whether Ohio EPA would be monitoring the algae in nearby streams and rivers.**

Response 34: The Portage River watershed had extensive biological and chemical monitoring in 2006 through 2008. Causes of and impacts from algae were documented in this study.

Comment 35: **Commenters questioned the over-application of phosphorus on land application fields located in an impaired watershed.**

Response 35: See Response 14.

In 2007, Ohio EPA, Division of Surface Water established the Phosphorus Task Force with wide representation of stakeholders (city, state and federal agencies, academia, and industry) to debate this pervasive problem, and make recommendations to reduce phosphorus loading to Lake Erie and tributaries of Lake Erie. Current permit conditions and state standards for manure application and utilization relating to phosphorus allows multi-year applications and hinges largely on whether soil test levels of phosphorus are above or below 150 parts per million. However, there has been extensive discussion by the Phosphorus Task Force that go toward whether current state standards for applying phosphorus to agricultural land are protective of the state's waters and Lake Erie. Information on the Phosphorus Task Force is available at: http://www.epa.ohio.gov/dsw/lakeerie/index.aspx.

Milkhouse Wastewater

Comment 36: **Commenter questioned whether Ohio EPA would mandate Reyskens Dairy to re-engineer its facility so that milkhouse waste does not get pumped into the manure storage pond and does not get land applied and "pollute the soil surface" or "contaminate any water supply" in accordance with Ohio Administrative Code (check) 901:11-2-17.**

Response 36: The regulation cited in the comment is enforced by the Ohio Department of Agriculture, Dairy Division not Ohio EPA. For additional information, see the web site at: http://www.ohioagriculture.gov/dairy/.Under the NPDES program, milkhouse wastewater is considered manure and required to be land applied rather than discharged to waters of the state. All manure land application permit requirements apply.

Western Banded Killifish

Comment 37: **Commenter questioned whether discharges should be permitted into surface waters containing threatened species.**

Response 37: The NPDES permit does not permit a discharge of manure to surface waters. It does permit the discharge of uncontaminated storm water associated with industrial activity and requires that water quality standards be maintained. The status of the fish was be evaluated in Ohio EPA's study of the Portage River.

An article published in *Ohio Journal of Science*, "Recent Records of the Endangered Western Banded Killifish, *Fundulus diaphanous menona*, in the Portage River, Basin, Ohio" [95(4): 294-297, 1995], after the Ohio EPA chemical and biological survey of the Portage River basin states:

"Trautman (1981) reported the largest populations of *F. d. menona* in low-gradient streams with clear water, abundant aquatic vegetation, and substrates of sand, marl, or organic debris. Both Bull Creek and Needles Creek are degraded by agricultural practices, and conditions in the two streams do not closely match the conditions necessary for large populations of this subspecies (*sensu* Trautman 1981). Habitat in both streams is impacted by channelization, removal of riparian canopy, siltation, and agricultural runoff. However, Needles Creek differs from Bull Creek in that the substrate is composed of more sand and less silt and algal growth. Perhaps the populations present today have adapted in some degree to the degraded conditions of streams within the Portage River basin. Nevertheless, the Bull Creek and Needles Creek populations may be in danger of extirpation given the degraded habitats and the periodic disturbance from channelization and removal of riparian vegetation."

General

Comment 38: **Commenters requested more strict regulations and monitoring of CAFOs.**

Response 38: The NPDES permit contains the federal requirements for the regulation of CAFOs and Ohio EPA has included additional requirements to be more protective of Ohio's surface waters. Should the requirements in the permit fail to be protective of water quality, Ohio EPA will revise the permit accordingly.

Comment 39: **Commenter questioned why Reyskens Dairy LLC is applying for an NPDES permit if they are a "no discharge" facility?**

Response 39: Some background information is necessary in order to respond to these comments. For regulation purposes, the dairy is separated into two areas, the production area and the land application areas. The production area includes the barns, feed storage areas, manure storage areas, etc. Within the production area, there are areas that generate contaminated storm water and areas that generate clean storm water. The NPDES permit requires that all manure and contaminated storm water be collected and contained, thus the "zero discharge" requirement, unlike sanitary wastewater treatment plants where discharges of treated wastewater are permitted. The dairy is designed to separate the contaminated storm water from the clean storm water. The clean storm water (runoff from barn roofs, front driveways, etc.) can be discharged. This clean storm water is called "storm water associated with industrial activity" throughout the permit. In this dairy, the clean storm water is routed to a storm water detention basin that has an overflow to the roadside tributary. This clean storm water overflow is required to be sampled twice per year to verify that it is clean. May and November were the months selected for the sampling as it is expected that sufficient precipitation should occur in these months to cause an overflow from the detention basin.

As for the land application fields, federal and state regulations require manure to be applied to the fields in accordance with certain standards (those outlined in the NPDES permit). The regulations also acknowledge that some of the nutrients applied to land will move to surface waters, either by dissolving into precipitated water or traveling attached to soil particles. In this area of the state, the pathways to surface waters include traveling through the soil column into field tiles or along the surface of the field. This movement of nutrients occurs during precipitation events and is permitted through a clause in the regulations called the "agricultural storm water exemption." This exemption only applies when manure has been applied to the fields in accordance with all the requirements of the NPDES permit. Ohio EPA has developed the permit requirements with the intent to be protective of surface waters. Land application that does not occur in accordance with the permit or that leads to a dry weather discharge of manure to waters of the state is a violation of the permit.

It should be noted that since the public hearing and comment period on the proposed Reyskens Dairy LLC NPDES permit, the facility has had two documented discharges and is now required to apply for and be covered under an NPDES permit. The structural flaws that have contributed to the discharge have been corrected through facility construction. Ultimately, new construction at the facility will correct any current deficiencies in design at the facility. If the facility does not discharge through the permit life cycle, the permit may not be required to be renewed.

Comment 40: **Commenter questioned how Reyskens Dairy LLC could apply to Ohio EPA for an NPDES permit for 1,800 cows when the facility only had permits from Ohio Department of Agriculture (ODA) for 925 cows and draft permits for 1,800 cows.**

Response 40: The most recent CAFO NPDES permit application lists 1,800 cows with plans to expand to 2,000 cows. The facility's NPDES permit will be written for 2,000 cows. However, the facility cannot expand to 2,000 cows until it has received approval from ODA.

Comment 41: **Commenter questioned how Ohio EPA can consider an NPDES permit for a facility whose ODA permits are under appeal with the Environmental Review Appeals Commission.**

Response 41: Ohio EPA has reviewed the appeal of PDA's permits and has received an updated MMP that appears to address the issued raised in the appeal. It is our understanding the appeal is no longer pending. If changes to the facility or MMP have been required as a result of the appeal, the NPDES permit would have been modified accordingly.

Comment 42: **Commenter requests additional information on who actually owns the dairy and who has control of the day-to-day operations. Also additional information is requested on the experience and compliance history of the dairy owners/operators.**

Response 42: For the purposes of the NPDES permit, the applicant on the permit application, Mark van de Heijning, would be responsible for ensuring compliance with the NPDES permit. The ODA permit-to-operate and CAFO NPDES permit have very similar requirements and the dairy has had several

years to become familiar with the requirements of their ODA permit.

Comment 43: **Commenter noted that two different MMPs were submitted as part of the NPDES permit application and questioned which plan would be followed.**

Response 43: The MMP received on July 6, 2012, with additional information submitted October 19, 2012, is the MMP included in the NPDES permit.

Comment 44: **Commenter questioned the reason storm water associated with industrial activity is regulated in the NPDES permit however the dairy is not made to comply with other industrial regulations.**

Response 44: Under federal regulations in 40 CFR Part 122.26(b)(14)(i), CAFOs are considered to be engaging in "industrial activity" because they are subject to effluent limitations under 40 CFR Subchapter N. They are therefore required to be covered under an NPDES Industrial Storm Water permit. Ohio EPA has included the industrial storm water requirements in the CAFO permit.

Comment 45: **Commenter questioned why the storage of untreated manure in the open manure storage structures is permissible in light of the permit language in Part III, 2, D which states that the effluent shall be free of substances "in amounts that either singly or in combination with other substances are toxic to human, animal, or aquatic life."**

Response 45: The language in Part III, 2, D of the permit refers to treated effluent that is permitted to be discharged to surface waters, such as the storm water associated with industrial activity. Manure is not an effluent in this case since it is not permitted to be discharged.

Comment 46: **Commenter questioned whether there is treatment of manure generated at the facility (in reference to Part III, 3 of the draft permit) and if not, requests a reason why not.**

Response 46: The language in Part III, 3 refers to treatment of wastewater and discharge of the treated effluent. There will be some treatment of the manure generated at the facility but not to

the extent that the manure will be permitted to be discharged. Regardless, the permit does require the permittee to maintain the facility for proper operation.

Comment 47: **Commenter questioned whether Ohio EPA has visited the Reyskens Dairy LLC site and investigated the surrounding surface waters for compliance with the draft permit.**

Response 47: Ohio EPA, Division of Surface Water has visited the Reyskens Dairy LLC facility and has conducted water quality sampling. Water quality samples were collected during the response to the October 26, 2009 discharge and are provided below.

Table 1. Water quality samples collected in response to discharge on October 26, 2009

Parameters (at right)	*E. Coli*	*Ammonia*	*TKN*	*Total Phosphorus*	*$CBOD_{20}$*
	#/100 mL	mg/L	mg/L	mg/L	mg/L
Sampling Location (below)					
Roadside ditch upstream of storm water pond discharge	130	<0.050	0.67	0.053	5.9
Roadside ditch just downstream of storm water pond discharge	15,000	3.38	7.60	1.56	180
Roadside ditch east of eastern farm lane at Reyskens Dairy	11,000	2.64	5.70	1.23	190
Roadside ditch southwest of Needles Creek	3,600	0.593	3.42	0.579	67
DERR sample taken from roadside ditch at driveway just upstream of discharge	-	<0.050	-	0.064	4.4[1]
DERR sample taken from roadside ditch just downstream of storm water pond discharge	-	2.20	-	0.918	110[1]

[1]The oxygen demand parameters for the samples collected by DERR are BOD_5

Comment 48: **Commenter expressed concern over a sand pocket that was discovered during the construction of the manure storage pond.**

Response 48: Ohio EPA does not approve the construction of the structural components of CAFOs. The regulation of design and

construction of manure storage facilities is under the control of ODA.

Comments from Reyskens Dairy LLC

Comment 49: **It is requested that Ohio EPA delete the requirement in Part I, A, 1, d (sampling during an emergency) or that if the requirement will not be deleted, that item (b) of this provision be expanded to state that sampling may also be delayed where area laboratories are not open or where immediate sampling would hinder cleanup of the spill.**

Response 49: From the Response to Comments on the NPDES General Permit for CAFOs:
[In the general permit, Ohio EPA included the requirement for sampling discharges of manure from the production area and notification of Ohio EPA within 24 hours in Part III, A, 1, e. Although not required in the federal regulations, Ohio EPA has included the sampling requirement to determine whether the discharge from the production area met Ohio Water Quality Standards, determine the impact to the stream and provide an explanation for fish kills. Spill sampling data is very important for use in much of the water quality monitoring and assessment work that Ohio EPA performs. Since Ohio EPA investigators may not always be able to reach a spill site in time to collect water quality samples of the discharged manure slug (since the permittee has up to 24 hours to contact Ohio EPA), the permittee will now be responsible for this sample collection and payment for the analysis, since it is their spill. Soon, Ohio EPA will provide training on proper sample collection. Other local agencies, such as Soil and Water Conservation Districts, health departments, wastewater/drinking water treatment plant operators and consultants, could also be contacted for assistance. It is recommended that the permittees contact a local laboratory prior to any spills to determine if the laboratory can test for the required parameters in the permit and to obtain sample containers to have on hand, should a spill ever occur. It should be reiterated that manure discharges from the production area are prohibited (except under extreme circumstances); therefore, a properly operated and maintained facility may never have to collect water samples.]

Comment 50: **The provision in Part II, E requires at least one foot of freeboard to be maintained in manure storage structures at all times, in addition to enough capacity to handle a 25-year, 24-hour precipitation event. Although the purpose of this freeboard and storm capacity is to absorb storm events without overflowing, under this provision a violation occurs if such a storm event, a larger storm event, more than one storm event, or chronic precipitation decreases the freeboard after such events. This grace period should take into account the weather conditions, soil saturation, and other field conditions existing after the loss of freeboard.**

Response 50: It should be noted that the NPDES permit requires a one-foot freeboard in addition to enough capacity to handle a 100-year, 24-hour precipitation event.

From the Response to Comments on the NPDES General Permit for CAFOs:
[The intent of the freeboard is to ensure that there is capacity for storm events. If there is not sufficient freeboard immediately following a storm event, an enforcement action would be unlikely unless there was a discharge. Clearly, records must be kept, and it needs to be demonstrated that efforts are made to reduce the levels in the lagoon as soon as the fields are suitable. The key is to keep records and make good faith efforts in those circumstances. It should be noted that constantly operating a lagoon to just barely have enough freeboard is not a good operating strategy, and Ohio EPA would have concerns if that was the case. Concerns with compliance are then conveyed to the permittee. In terms of the discharge, the producer would need to have records to show that the storm event was a 25-year, 24-hour or greater event, or that the chronic exemption applies.]

Comment 51: **The cross reference in Part II, K to Part VII, B, 6 is in error, since that provision applies to manure applied under our control, not manure distributed to others.**

Response 51: Part VII, B, 6 clarifies the permittee's responsibility for land application activities that are not classified as utilization and distribution of manure.

Comment 52: **Part II, P requires maintenance of the records required by several sections of the Code of Federal Regulations, without identifying those records. We do not subscribe**

to the Code of Federal Regulations, nor should we be required to do so, and we will not have notice if any of these provisions change during the term of the permit. The required records must be listed in our permit so that we will have fair notice of what is required.

Response 52: This section has been revised and no longer references the Code of Federal Regulations.

Comment 53: **With regard to the annual report requirements in Part II, J, 8 and Part III, 12, E, whereas 40 CFR 122.42(e) requires the annual report to include a list of any discharges occurring during the last year, Ohio EPA has chosen to add another, seriously burdensome annual reporting requirement. Not content with reporting discharges, this provision requires us to report every noncompliance, its cause and its exact time and date. Other NPDES permittees are not required to report every violation that occurs (e.g., the general permit for industrial storm water activities). Ohio EPA's inclusion of this requirement is inconsistent with federal and state law and highly unreasonable.**

Response 53: From the Response to Comments on the NPDES General Permit for CAFOs:
[Under 40 CRF Part 122.41(l)(7) states that "the permittee shall report all instances of noncompliance not reported under paragraphs (l)(4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (l)(6) of this section." Therefore the permittee shall report any other noncompliance that was not reported on monthly operating reports, not reported on reports required by schedules of compliance and not reported on the reports submitted as a result of a spill. The following information is required to be reported: a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. This requirement is required to be in all NPDES permits by 40 CFR Part 122.41. Therefore, the inclusion of this permit condition in the NPDES General Permit for CAFOs is consistent with federal and state law. Ohio EPA disagrees that this permit condition is unreasonable.

Also Part V, C, 1 already requires documentation of deficiencies as the result of the inspection and monitoring provisions in Part V, C, along with documentation of any actions taken to correct the deficiencies. This documentation could be copied and submitted in the annual report.

The review of non-compliance is important in making steps to improve compliance with the NPDES permit. This requirement also provides the permittee a chance to explain any non-compliance and details the steps that are being proactively taken to address the issue. It is also a chance for the permittee to refresh their memory regarding their permit conditions and even note conditions of the permit that are no longer applicable or require modification.

It should be noted that U.S. EPA's example annual report and sample NPDES permit include this requirement (http://cfpub2.epa.gov/npdes/afo/info.cfm#cafo_pub).]

Comment 54: **With regard to winter application provisions in Part II, Q, Part VII, A, 4, e, (3), iii and Part VII, B, 5, these provisions require us to make every attempt to avoid the application of manure to frozen or snow-covered ground. The permit provisions greatly exceed what is necessary to avoid water pollution and should be revised.**

Response 54: From the Response to Comments on the NPDES General Permit for CAFOs:
[In the revised NPDES general permit, Ohio EPA strengthened the requirements on the land application of manure to frozen and/or snow covered ground. These revised permit requirements were developed in response to numerous factors and comments. The revised requirements depict Ohio EPA's attempt to develop standards that would be more protective of water quality without becoming so detailed and stringent that very few operators would be able to meet the requirements in an emergency situation.

First, it should be stated that the land application of manure to frozen and/or snow covered ground is not permitted as a standard practice; the application shall only occur in an emergency. In an effort to emphasis this point, Ohio EPA has added language to the permit in Part IV, E that states,

"adequate manure storage volume shall be provided and maintained to prevent the necessity of land applying manure on frozen and/or snow covered ground. No later than September 15 of each year, the permittee shall evaluate the storage capacity in their manure storage or treatment facilities and determine what steps are needed to avoid the need to land apply manure on frozen or snow covered fields for the upcoming winter. The operating record for the facility shall include documentation of the storage level as well as what was considered in this evaluation, and what actions were taken to avoid the need for land application of manure on frozen or snow covered ground. Failure to perform the evaluation or failure to take action if the evaluation indicates that action was necessary to avoid land application on frozen or snow covered ground shall be considered a violation of this permit."

Should a CAFO owner/operator have an emergency where manure removal is necessary, Part VI, B, 5 indicates, "Other locations for manure disposal should be investigated prior to the land application (i.e., transfer of manure to another facility, wastewater treatment plant, rental or acquisition of a storage tank, etc.). Stockpiling of solid manure, in accordance with this permit, shall be utilized rather than spreading on the field." Therefore, the owner/operator should consider other disposal options. Solid manure, such as poultry, pen-pack manure, and sand separator solids should be stockpiled until no frozen/snow covered ground conditions exist. In the cases where manure will be applied, clarity has been added to the restrictions in the original permit, for example the requirement for 90 percent residue cover has been further expanded to indicate that the vegetation/residue shall not be completely covered by ice and/or snow at the time of application since the purpose of the residue cover is to help hold the manure in place and provide filtering treatment. The setback requirement was also further expanded to indicate that the 200-foot setback must also have at least 90 percent surface residue cover and that the vegetation/residue shall not be completely covered by ice and/or snow at the time of application.

Ohio EPA also added new language to the revised permit that provides incentive for the CAFO owner/operators to 1) select the most suitable field for the application and 2) follow all the NPDES permit requirements. The following was added to Part VI, B, 5, "If the permittee surface applies

manure on frozen or snow covered ground and runoff from the field discharges to waters of the State, then the permittee shall notify Ohio EPA within two hours of detection of the runoff event. If the ammonia nitrogen level is determined to be 26 mg/L or greater in the discharge at the point it enters waters of the state, then any additional surface application of manure to frozen and/or snow covered ground is prohibited on the field where the runoff event occurred. In the event that the permittee follows the permit requirements and runoff from a frozen or snow-covered field discharges to waters of the state with an ammonia nitrogen content of 26 mg/L or greater in a total of three surface land application events, then surface application of manure on any frozen and/or snow-covered ground is prohibited for that permittee from that point on. In the event that a permittee fails to comply with the land application requirements for frozen or snow-covered ground (including notification of discharges, monitoring and record keeping requirements) more than two times, then land application on any frozen or snow-covered ground will be prohibited for that permittee upon receipt of the third notice of violation by Ohio EPA.

The above stated notification time of within two hours of discovery is intended to allow Ohio EPA opportunity to arrive at the application site and collect the required water quality samples while the pollution is occurring and/or work with other agencies to respond should Ohio EPA not be available. Since all large CAFOs must notify ODA prior to the land application on frozen/snow-covered ground and runoff from the land application typically occurs during periods of warming temperatures above freezing or precipitation, Ohio EPA will be ready to respond to runoff situations.

CAFOs should have the storage capacity in their manure storage structures to contain all their manure through the winter (three to four months). If this is not the case, then the CAFO must re-evaluate their manure management strategy.

Since a majority of the CAFOs will not be covered by the permit until 2006, the CAFOs have an opportunity to develop an alternative manure management strategy that would include a “plan B” in situations where land application of manure is not suitable.

The suggestions listed in the permit for alternative disposal of manure in lieu of land application on frozen/snow-covered ground will not be removed from the general permit. Ohio EPA does not agree that it is unreasonable or impractical to suggest that manure be hauled to another facility, wastewater treatment plant, or stored in a rented storage tank as these options have been utilized by CAFOs in the past. These options are offered for consideration as a "Plan B" for cases when manure land application is not a suitable manure utilization option. Should a CAFO not wish to accept these alternatives, then Ohio EPA recommends that they determine a more suitable alternative option for their operation and have this option included in their emergency response plan.

The language in Part VI, B, 5 will not be weakened. The intent of the existing language is to make clear that the application of manure on frozen/snow-covered ground is not proper manure management and is only an option in an emergency situation. The lack of pre-planning and lack of sufficient manure storage capacity going into winter does not constitute an emergency situation.

In response to the official comments made by U.S. EPA, Ohio EPA discussed revisions of the permit requirements for the land application of manure on frozen and/or snow-covered ground with partner state agencies and presented the options to the ODA Concentrated Animal Feeding Facility Advisory Committee. Ohio EPA has selected the second option of requiring additional monitoring and water quality sampling and has included this language in the final permit. It should be noted that these additional requirements will apply by April 1, 2007, for existing facilities. Ohio EPA will provide training on proper sample collection procedures to producers in the near future. Option 1 was not selected because the option of land applying manure in an emergency would be prohibited for most of the state. Also, Ohio EPA did not wish to single out one species in the permit requirements. The data collected under Option 2 will also assist in determining the adequacy of the setbacks and other restrictions in the final permit for frozen/snow-covered ground applications and guide future decisions related to this issue. Ohio EPA also intends to continue the monitoring and data collection in this regard to better understand water quality impacts.]

Comment 55: **Requirements under Part III, 26 and 28 must be specifically listed rather than cross referencing the Code of Federal Regulations.**

Response 55: As stated in previous Response to Comments on other individual CAFO NPDES permits, the permit will not be changed. Part III is standard language contained in every individual NPDES permit. The Code of Federal Regulations pertaining to these sections can be found on the web at: http://cfpub2.epa.gov/npdes/npdesreg.cfm?program_id=7.

Comment 56: **With regard to Part III, 32, the provision required the abandonment of a "semi-public disposal system" whenever public sewers become available. This provision has no applicability to the dairy facility, is not included in other CAFO permits to our knowledge and must be deleted.**

Response 56: As stated in previous Response to Comments on other individual CAFO NPDES permits, the permit will not be changed. Part III is standard language contained in every individual NPDES permit. Although it seems unlikely that public sewers will become available in the next three years, it should be noted that Reyskens could be required at such time to connect sanitary wastewater into public sewers.

Comment 57: **Part VII, A, 2, and 3 requires monitoring for constituents unrelated to water quality (potassium, pH, calcium, magnesium and cation exchange capacity) in soil samples. Since U.S. EPA's regulations do not require monitoring for these parameters, Ohio EPA should not require this monitoring.**

Response 57: The above referenced parameters required in the soil analysis are used in the determination of the manure application rates for the CAFO; therefore it is imperative that these parameters are included in the soil analysis. These parameters are also required by ODA for soil sampling. It would be impractical for Ohio EPA to require a separate soil analysis for some of the same parameters when the same analysis can be used to satisfy both Ohio EPA and ODA soil analysis requirements as the general permit is currently written.

Again, the NPDES permit regulates proper agronomic utilization of manure. Since these parameters are necessary

for determining the proper agronomic use of manure, they must be included in the manure and soil sample analysis. The federal regulations in no manner specify that additional parameters cannot be required by the states, it only lists the minimum parameters. Since these parameters are already required by ODA and NRCS, Ohio EPA is not making the CAFO pay any unnecessary expense for the analysis.

Manure application rates are not based solely on nitrogen and phosphorus levels. Other parameters, such as potassium, are used to determine manure application rates which are regulated in the NPDES permit; therefore Ohio EPA can require their analysis. Ohio EPA has authority to develop state technical standards for manure management and has included this analysis in those standards.

Comment 58: **Part VII, A, 3, c, (2) requires that soil samples be collected at least six months after manure application. The owner or operator of a CAFO should be provided with the choice of when to sample based on individual circumstances, accuracy of results and efficiency, while understanding the variations that may occur.**

Response 58: In order to remain consistent with ODA regarding soil sampling, Ohio EPA has included the language in ODA's rule 901:10-13(D)(2) in its CAFO NPDES permits. By remaining consistent with ODA for the soil sampling requirements, the soil samples that are required by this permit can also be used to satisfy the soil sampling requirements in the ODA permit for that same facility, if applicable. This requirement is also consistent with the intent of USDA, NRCS Conservation Practice Standard 590, (although it should be noted that 590 recommends that soil tests should not be taken for nine to 12 months following manure or other organic by-product application).

It should be noted that Ohio EPA is interested in developing permit conditions that result in the collection of accurate data and not false high data; therefore the requirements to collect soil samples at least six months after manure application will remain in the final version in the permit as consistent with ODA rules and NRCS standards.

Comment 59: **Part VII, B, 1 and B, 2, g prohibit the application of manure where erosion exceeds "T." Insofar as this is an inexact science and from the perspective of an agency**

to evaluate compliance, this proposed rule should be deleted.

Response 59: From the Response to Comments on the NPDES General Permit for CAFOs:

[In the revised general permit, this requirement has been changed to Part VI, B, 2, g. This requirement was included in the NPDES general permit at the request of U.S. EPA and is also consistent with USDA, NRCS 590, which states that "erosion, runoff and water management controls are to be installed, as needed, on fields where nutrients are applied. Sheet and rill erosion shall be managed within the tolerable soil loss for the field". Methods to predict the sheet and rill erosion and values of "T" can be found in the Ohio NRCS electronic Field Office Technical Guide. The purpose of this requirement is to reduce sediment and nutrient laden discharge into waters of the state.

40 CFR Part 122.42(e)(1)(vi) indicates that the CAFO nutrient management plan must include appropriate site specific conservation practice to be implemented, including as appropriate buffers or equivalent practices to control runoff of pollutants to waters of the State. This requirement is also inline with 40 CFR Part 412.4(c)(1) that requires the CAFO to develop a MMP that is based on a field-specific assessment of the potential for nitrogen and phosphorus transport from the field. The higher the soil erosion from a field the higher the potential for phosphorus transport into waters of the state.

Also, in order for the CAFO to perform the phosphorus risk assessment procedure, the annual soil loss must be determined for the all the application fields. This soil loss value can then be compared to the tolerable soil loss value ("T") to determine if soil erosion is a concern on that individual farm field. The soil loss value of a field can be reduced by implementation of conservation practices to values below "T" that may then allow a field to be used for manure application.]

Finally, it should be noted that each land application field should be evaluated to make sure that the use of the field for land application is in compliance with NPDES permit conditions for items such as setbacks, phosphorus levels and soil erosion. This requirement regarding "T" is not only

a best management practice stated in USDA-NRCS 590, but also goes along with Part II, K, 3, e that requires “site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the state.”

The submitted MMP does contain a chart of soil loss and “T” values for the land application fields. Manure application is not planned to occur on those fields where the soil loss exceeds “T.”

End of Response to Comments